

Appln No. 10/816,396
Amdt date November 7, 2006
Reply to Office action of July 7, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please amend claim 1, 3 and 4, add new claims 31 to 33 and cancel claims 5, 6, 8-10, 16 and 23-30.

1. (Currently Amended) A catheter comprising:
an elongated catheter body having proximal and distal ends and at least one lumen therethrough;
a three-dimensional ablation assembly at or near the distal end of the catheter body, said assembly having a framework defining a length and a circumference, the assembly movable into a collapsed configuration with a greater length and a lesser circumference and an expanded configuration with a lesser length and a greater circumference, the framework comprising a plurality of tensile members interwoven in a manner such that the length increases as the circumference decreases and vice versa;
said assembly also having a ribbon electrode extending along said circumference, said ribbon electrode adapted to move with said framework; and
~~an expander attached at or near its distal end to distal ends of the tensile members, the expander being longitudinally moveable relative to the catheter body to expand and collapse the ablation assembly~~ a tip electrode mounted at or near a distal end of the ablation assembly.

2. (Original) A catheter of claim 1, wherein said framework of the assembly in the expanded configuration has a first circumference in a first section along its length and a different second circumference in a second section along its length.

3. (Currently Amended) A catheter of claim 1, further comprising an ~~wherein the~~ expander attached at or near its distal end to distal ends of the tensile members and extending ~~extends~~ through the catheter body, the expander having a proximal end that extends out the proximal end of the catheter body, and having a lumen extending therethrough, whereby, in use,

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the expander can be moved longitudinally relative to the catheter body to expand and collapse the assembly.

4. (Currently Amended) A catheter of claim 1, further comprising an ~~wherein the~~ expander attached at or near its distal end to distal ends of the tensile members and extending extends through at least a distal portion of the catheter body, whereby, in use, the expander can be moved longitudinally relative to the catheter body to expand and collapse the assembly.

5. (Canceled).

6. (Canceled).

7. (Original) A catheter of claim 1, wherein the expander is moved proximally to actuate the assembly into the expanded configuration.

8. (Canceled).

9. (Canceled).

10. (Canceled).

11. (Original) The catheter of claim 3, wherein the expander comprises plastic tubing.

12. (Original) The catheter of claim 3, wherein the expander comprises braided plastic tubing.

13. (Original) The catheter of claim 3, wherein the expander has a proximal end attached to a control handle.

14. (Previously Presented) The catheter of claim 13, wherein the control handle comprises:

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a handle housing having proximal and distal ends, and a piston having a proximal end mounted in the distal end of the handle housing and a distal end fixedly attached to the proximal end of the catheter body;

wherein the proximal end of the expander is fixedly attached, directly or indirectly, to the handle housing so that longitudinal movement of the piston relative to the handle housing results in longitudinal movement of the expander relative to the catheter body to thereby expand and collapse the assembly.

15. (Original) The catheter of claim 14, wherein the proximal end of the expander extends outside the proximal end of the control handle and through a support tube.

16. (Canceled).

17. (Original) The catheter of claim 3, wherein the expander is generally coaxial with the catheter body.

18. (Original) The catheter of claim 3, wherein the expander forms the axis of the assembly.

19. (Original) The catheter of claim 1, wherein the assembly comprises at least four tensile members.

20. (Original) The catheter of claim 1, wherein each tensile member comprises an internal flexible wire and a non-conductive covering over the flexible wire.

21. (Original) The catheter of claim 20, wherein the internal flexible wire of each wire comprises nitinol.

22. (Original) The catheter of claim 1, wherein the ribbon electrode is elastic.

23. (Canceled).

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24. (Canceled).

25. (Canceled).

26. (Canceled).

27. (Canceled).

28. (Canceled).

29. (Canceled).

30. (Canceled).

31. (New) A catheter of claim 1, wherein the ribbon electrode comprises a plurality of ribbon electrodes, each ribbon electrode extending along a circumference of the framework and being adapted to move with the framework.

32. (New) A catheter comprising:
an elongated catheter body having proximal and distal ends and at least one lumen therethrough; and

a three-dimensional ablation assembly at or near the distal end of the catheter body, said assembly having a framework defining a length and a circumference, the assembly being movable into a collapsed configuration having a greater length and a lesser circumference and an expanded configuration having a lesser length and a greater circumference, the framework comprising a plurality of tensile members interwoven in a manner such that the length increases as the circumference decreases and vice versa, and wherein the framework is sufficiently flexible that the diameter need not be constant along the length and the length need not be constant along the circumference so that the framework can conform to an interior volume of a nonuniformly-shaped tubular region;

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said assembly also having a ribbon electrode extending along said circumference, said ribbon electrode adapted to move with said framework.

33. (New) A catheter of claim 32, wherein the ribbon electrode comprises a plurality of ribbon electrodes, each ribbon electrode extending along a circumference of the framework and being adapted to move with the framework.